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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/261,209	03/03/1999	PETER D. KARABINIS	027575-212	7458

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EXAMINER	
HOM, SHICK C	

ART UNIT	PAPER NUMBER
2666	21

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/261,209	KARABINIS ET AL.
	Examiner	Art Unit
	Shick C Hom	2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *47-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *47-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. In view of the appeal brief filed on 5/6/03, and response and declaration filed on 3/22/04, PROSECUTION IS HEREBY REOPENED for the reasons set forth below.

2. To avoid abandonment of the application, appellant must exercise one of the following two options:

a. File a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

b. Request reinstatement of the appeal.

3. If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

4. Applicant's arguments with respect to claims 47-58 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 47, 49-51, 53-55, and 57-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al. (5,377,229) in view of Fang.

Regarding claims 47, 49-51, 53-55, and 57-58:

Wilson et al. disclose the communication system that communicates signal bursts comprising: a transmitter that transmits constant envelope modulated signal bursts; and a receiver that receives linearly modulated signal bursts, i.e. demodulates non-constant envelope signals (see col. 1 line 54 to col. 2 line 9 and col. 9 lines 54-66 which recite the linear modulated signals) as in claims 47, 51, and 55.

Wilson et al. disclose all the subject matter of the claimed invention with the exception of the transmitted signal bursts being between at least one mobile telephone and a satellite relay station over an uplink RF channel and the received non-constant envelope signal bursts being linearly modulated signal bursts from the satellite relay station to the mobile telephone over a downlink RF channel as in claims 47, 51, 55; wherein said linearly modulated signal is an Offset Quadrature Phase Shift Keying (OQPSK) signal as in claims 49, 53, 57; and wherein said constant envelope modulated signal bursts and said linearly modulated signal bursts are TDMA signal bursts as in claims 50, 54, 58.

Fang from the same or similar fields of endeavor teach that it is known to provide transmitted signal bursts between at least one mobile telephone and a satellite relay station over an uplink RF channel and received non-constant envelope signal bursts which is linearly modulated signal bursts from the satellite relay station to the mobile telephone over a downlink RF channel; wherein said linearly modulated signal is an Offset Quadrature Phase Shift Keying (OQPSK) signal; and wherein said constant envelope modulated signal bursts and said linearly modulated signal bursts are TDMA signal bursts (see page 567 which recite using TDMA transmission over satellite channels with uplink and downlink having non-linear elements and page 568 column 1 lines 9-28 which recite the satellite using offset QPSK modulation which corresponds to the linearly modulated OQPSK downlink signal from the satellite). Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide transmitted signal bursts being between at least one mobile telephone and a satellite relay station over an uplink RF channel and received non-constant envelope signal bursts which is linearly modulated signal bursts from the satellite relay station to the mobile telephone over a downlink RF channel; wherein said linearly modulated signal is an Offset Quadrature Phase Shift Keying

(OQPSK) signal; and wherein said constant envelope modulated signal bursts and said linearly modulated signal bursts are TDMA signal bursts as taught by Fang in the communications system and method of Wilson et al. The transmitted signal bursts being between at least one mobile telephone and a satellite relay station over an uplink RF channel and the received non-constant envelope signal bursts which is linearly modulated signal bursts from the satellite relay station to the mobile telephone over a downlink RF channel; wherein said linearly modulated signal is an Offset Quadrature Phase Shift Keying (OQPSK) signal; and wherein said constant envelope modulated signal bursts and said linearly modulated signal bursts are TDMA signal bursts can be implemented by providing the satellite relay station having the uplink RF channel including a transmitter for providing linearly modulated signal burst; wherein said linearly modulated signal is an Offset Quadrature Phase Shift Keying (OQPSK) signal; and wherein said constant envelope modulated signal bursts and said linearly modulated signal bursts are TDMA signal bursts to the receiver of Wilson et al. The motivation for providing the satellite relay station having the uplink RF channel and transmitter for providing linearly modulated signal burst; wherein said linearly modulated signal is an Offset Quadrature Phase Shift Keying (OQPSK) signal; and wherein said constant

envelope modulated signal bursts and said linearly modulated signal bursts are TDMA signal bursts as taught by Fang in the communication system and method of Wilson et al. being that the satellite relay station provides the added feature of a more global communication; the use of linearly modulated OQPSK signal provides better spectral efficiency; and the use of TDMA signal for the uplink and downlink increase the efficiency of the communication system by allowing a greater number of simultaneous transmissions in communication devices of Wilson et al.

8. Claims 48, 52, 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al. (5,377,229) in view of Fang as applied to claims 47, 51, 55 above, and further in view of Mundra et al.

Regarding claims 48, 52, 56:

For claims 48, 52, 56, Wilson et al. in view of Fang disclose the system and method described in paragraph 7 of this office action.

For claims 48, 52, 56, Wilson et al. in view of Fang disclose all the subject matter of the claimed invention with the exception of wherein said constant envelope modulated signal

is a Gaussian Minimum Shift Keyed (GMSK) modulated signal as recited in claims 48, 52, 56.

Mundra et al. from the same or similar fields of endeavor teach that it is known to provide constant envelope modulated signal being a Gaussian Minimum Shift Keyed (GMSK) modulated signal (see page 1, col. 2, lines 37-44). Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide constant envelope modulated signal being a Gaussian Minimum Shift Keyed (GMSK) modulated signal as taught by Mundra et al. in the communication system and method of Wilson et al. in view of Fang. The constant envelope modulated signal being a Gaussian Minimum Shift Keyed (GMSK) modulated signal can be implemented by using GMSK modulation as the particular type of constant envelope modulation in Wilson et al. in view of Fang. The motivation for using GMSK modulation as the particular type of constant envelope modulation as taught by Mundra et al. in the communication system and method of Wilson et al. in view of Fang being that it reduces the cost of uplink signal amplification, as recited in Mundra et al., and therefore lower the cost to produce the receiver in Wilson et al. in view of Fang.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Meidan et al. disclose a method and apparatus for operating with a hopping control channel in a communication system.

Klein discloses a navigation satellite system.

10. Any response to this nonfinal action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306, (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (2600 Receptionist at (703) 305-4750).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick Hom whose telephone number is (703) 305-4742. The examiner's regular work schedule is Monday to Friday from 8:00 am to 5:30 pm EST and out of office on alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao, can be reached at (703) 308-5463.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

SH SH

June 10, 2004

DANG TON
PRIMARY EXAMINER